JOHN SEXTON CONTRACTORS CO.
900 JORIE BOULEVARD
OAK BROOK, ILLINOIS 60521
(312) 654-1280

August 27, 1979

Ms. Ann L. Carr
Assistant Attorney General
Environmental Control Division
500 South Second Street
Springfield, Illinois 62706

RE: Peoria/Janson Solid
Waste Disposal Facility

Dear Ms. Carr:

The following information is given pursuant to your request for your use and that of the State's Attorney of Peoria County, also rendered to be helpful as a neutral influential party for the Circuit Court of Peoria County. It is our intent that this information be used to ameliorate the existing conditions and not as testimony for any criminal action you may file against Charles Janson.

The above identified disposal site was visited by the writer in the company of William Jackson, Regional Superintendent, Alfred E. Gallo, Corporate Counsel, yourself and representatives of the Illinois Environmental Protection Agency, Messrs. Nienkerk, Mensing and Taylor. Mr. Charles Janson, owner/operator of the site was also present during the course of our visit. The following letter report sums up the considered opinion of Mr. Jackson and myself as to the logical sequence of events required to correct the conditions on-site as noted below.

SITE CONDITIONS

It appears that the site has not been operated in accordance with the rules and regulations for the Illinois EPA. It has been reported to us that daily cover has not been applied and upon our visit we were not able to distinguish individual trench operations as noted in the plans by J. Douglas Andrews. No real plan of operation was discernable to us and the site was in general disorder.

A perimeter berm has been constructed around the site to protect adjacent waterways. The contractor claims the berm to be constructed of impermeable materials, a fact not borne out by the site conditions, i.e., there has been no pumping of that portion within the berm to eliminate naturally accumulating storm water. Thus, either the geological determination of site conditions is in error or the contractor is mistaken about the quality or continuity of the berm construction.

In a number of locations the earth is cracked and the surrounding soils are parched. Temperatures of the soils surrounding these areas are in excess of those normally occurring, and these are indications that the site has a number of scattered fires or pyrolytic areas (pyrolytic - the chemical, physical transformation of materials through high temperatures in the absence of oxygen). These areas may variously produce water vapor, steam, smoke and odor, depending upon the materials being consumed, its temperature, climatic and other conditions. We refer to these conditions as "hot spots" and do not distinguish between those which consume oxygen and those which are sustained by the waste in the absence of oxygen.

The "hot spots" we identified are noted on the provided Exhibit 1, but are not meant to include all that may exist which may or may not exhibit outward signs at the present time. Quite typically, these "hot spots" occur, consume materials, and continue, cease, cause subsidence, or break into the open. The specific exhibited characteristic is in direct response to many known and unknown variables.

HOT SPOT CORRECTION

The typical methods of eliminating fires at landfills are flooding, smothering or a combination of flooding and smothering. Fires or hot spots noted in their early stages, and surficial in nature, are easily dug out, spread thinly on a non-combustible soil surface, and tramped or flooded with water to eliminate the fire. (Pyrolytic "hot spots" usually become fires when oxygen reaches the overheated waste. Therefore, surficial "hot spots" are treated similarly to a fire.)

When fires or "hot spots" are found at greater depths, they may travel from cell to cell or where no cells are constructed, may travel without limitation throughout the fill. Flooding in place is seldom effective and the usual control method is similar to that of surficial hop spots except that excavation of the fuel source must precede the flooding or smothering of the fire.

CORRECTIVE ACTION AT THE JANSON SITE

To extinguish a fire or hot spot by smothering; sufficient quantities of earth materials must be available. Highly organic soils or soils intermingled with solid waste will not provide a suitable smothering material as the organic content may provide additional fuel. In like manner, any attempt to smother or flood a fire, excavated and spread on organic soils or soils intermingled with refuse is futile.

Adequate stockpiles of fire control soils (clean clays) are not presently visible on site nor are there any readily apparent sources. The site conditions at present show little potential for the spreading and smothering of a fire as the majority of the site is capped by uncovered solid waste, demolition materials and other non-compacted materials.

The following steps should be followed but may not necessarily be in the exact order of accomplishment as on-site tests and investigation may eliminate some of the concepts as being unnecessary.

1) A determination of the location(s) where suitable smothering cover soil may be available is the first order of business. We believe that the refuse may be spread thinly enough over some of the site and its removal would expose for use an adequate fire control cover source. Exploration for this soil source, and an area which can be cleaned of debris to allow smothering without spreading the fire, and the location of the hot spots, may well be accomplished using a drill rig. The location of bore holes for the proposed investigation are marked on the attached Exhibit A. Addition or deletion of these borings should be made in the field based on the data obtained from each previous boring. The drill rig will allow sub-surface exploration without the addition of oxygen which might stimulate the hot spots into active fires.

2) Hot spots, when located, should be excavated to the greatest extent possible. A determination that all the "hot" material has been removed should be made before each location is recompacted and covered with earth cover. If necessary, water will be used to quench the remaining materials to complete the extinguishing process. Carefully made temperature measurements of surrounding soils and wastes may be a good indicator of the progress at each location.

3) After locating and cleaning the site surface of a useable quantity of earth, a trench would be constructed to receive major portions of the burning waste for flooding and smothering or covering. Burning materials should be thinly spread, the fire tramped out, wet down and smothered by a layer of earth and the process repeated until the trench is completely full.

4) As the hot spots are sequentially identified, excavated, smothered in the receiving trench, and covered with earth, we recommend that other areas on the site be shaped and dressed to facilitate storm water runoff without erosion or excessive infiltration. We recommend that all berm slopes adjacent to waterway be laid back to a minimum of 3:0 slopes and compacted clay be placed to decrease permeability. Entire sections of this perimeter berm may have to be replaced to maintain an impermeable barrier.

5) It may be found desirable to construct berms or dikes around some of the hot spots before the attempt to eliminate the fire. An action such as this can prevent the advance of the fire much the same way as the daily cover would, had

it been routinely employed on this site. The berm will be constructed from original ground surface (at whatever level it now exists) and extends to a point at least one foot above the adjacent fill surfaces.

SUMMARY AND CONCLUSIONS

We have little exact knowledge with respect to this site's operation and therefor we cannot at this point in time describe the steps or activities required to eliminate any fire or hot spot. The Janson site solution is complicated by the fact that, although a plan exists, it was apparently not followed.

The preliminary investigations will be of great importance in defining the scope or extent of the corrective measures required. We believe this aspect of the corrective process to be one of the most, if not the most important aspect of the problem solution.

We hope that our comments are received as helpful and constructive assistance in correction of this site's operating deficiencies.

Should you wish additional comments with respect to our visit or this letter, please contact us at your convenience.

Very truly yours,

JOHN SEXTON CONTRACTORS CO.

Arthur A. Daniels
Executive Vice President

AAD:ms
encls.

COST ESTIMATE FOR PRELIMINARY INVESTIGATIONS

We have estimated below the cost of preliminary investigations of the site as described in corrective Action (1). The estimate below is just that, and no guarantee is expressed or implied.

Subsurface explorations.

Boring rig, move in and sampling.

40 borings @ 20'± deep - 800 l.f. @ $5.00/lf - $4000.00

Supervision and control of boring progress

10 days @ $275.00/day	= $2750.00
Miscellaneous expenses - 10%	= $ 675.00
	$7425.00

These investigations will result in a letter report outlining the sequence of events and activities and the probable quantity of excavation, time and materials with a cost estimate for the concluding phases of the project.

Report writing, conclusions and findings.	$ 750.00
	$8175.00